

(No Model.)

2 Sheets—Sheet 1.

W. H. TAYLOR.
MACHINE FOR FINISHING SHOE COUNTERS.

No. 559,632.

Patented May 5, 1896.

Fig. 1.

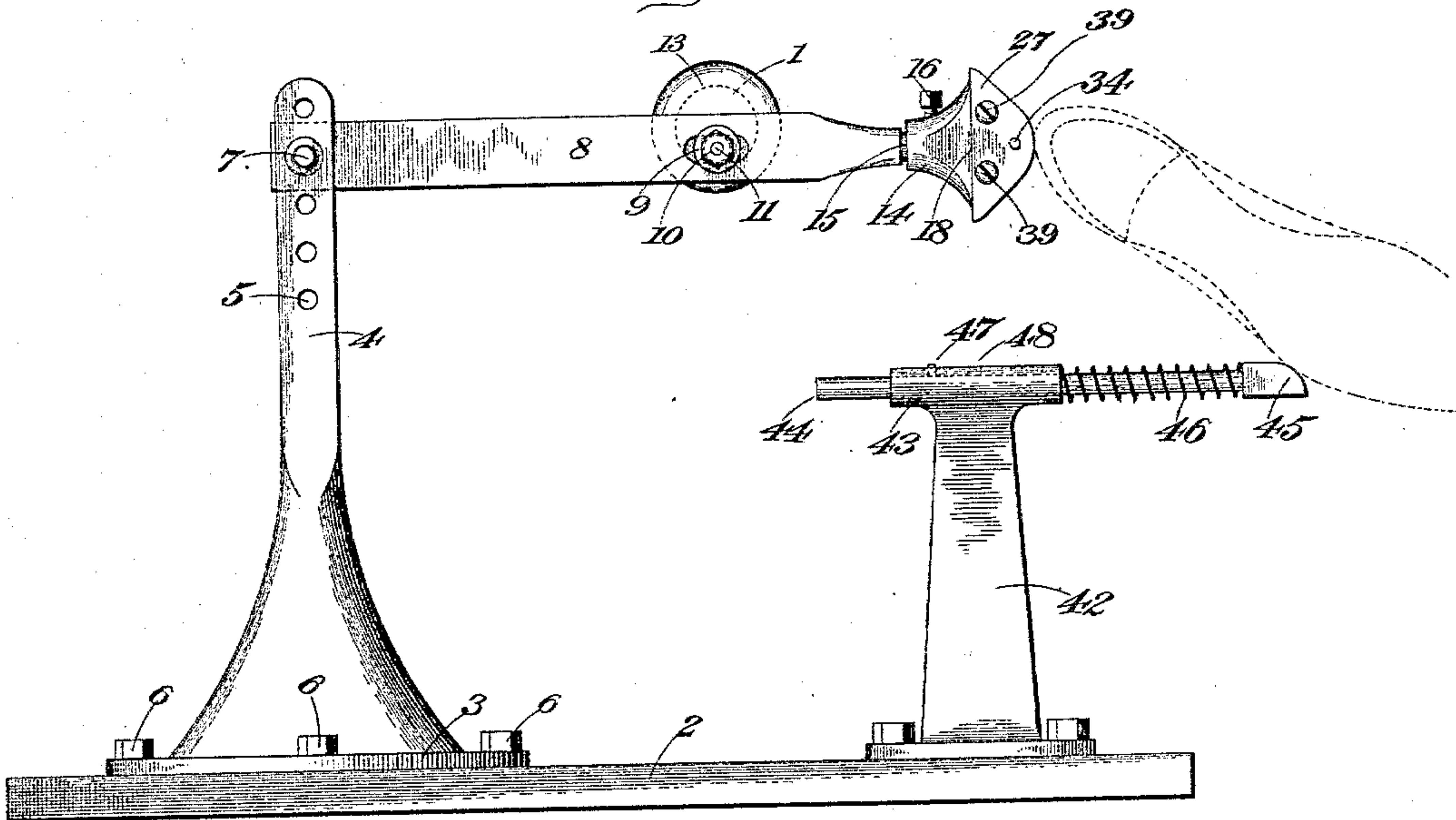
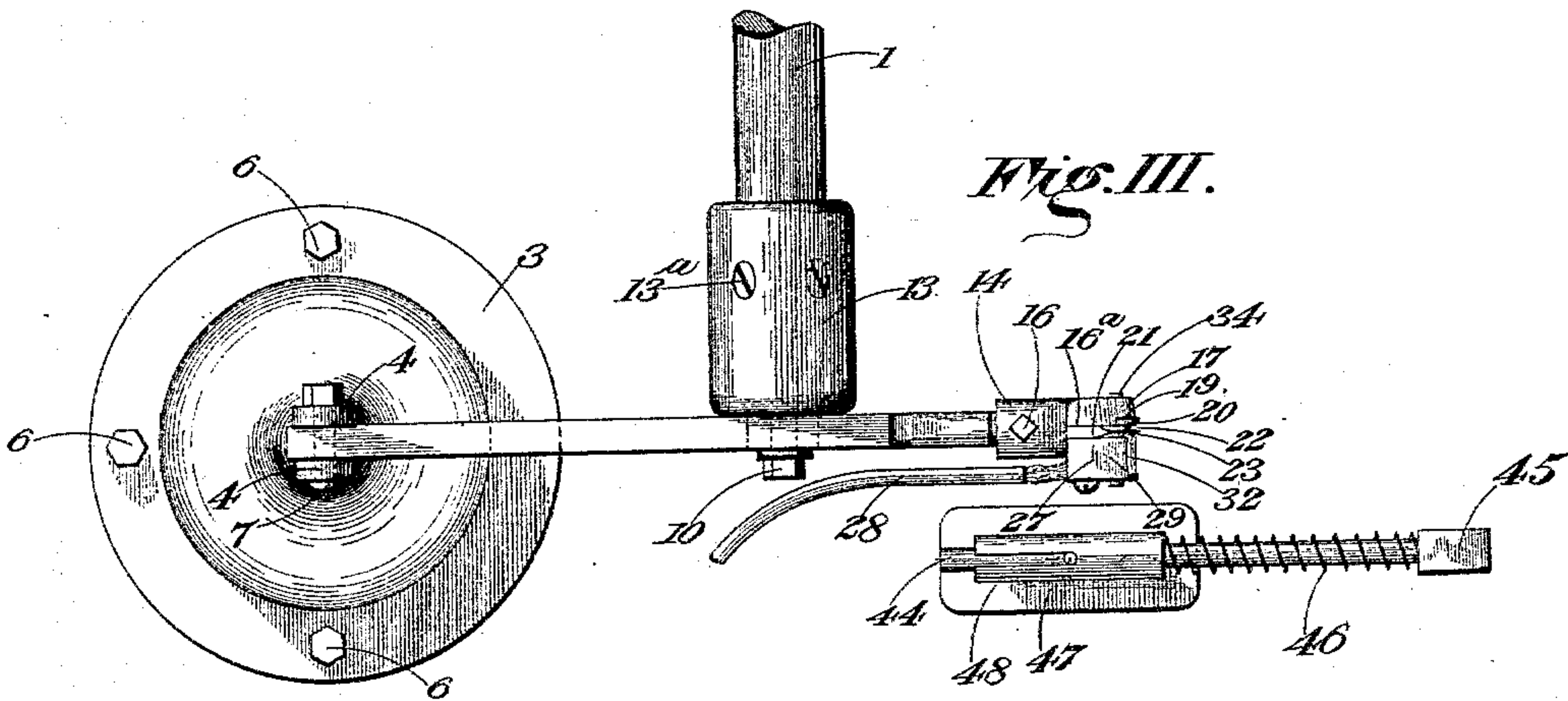


Fig. III.



Witnesses

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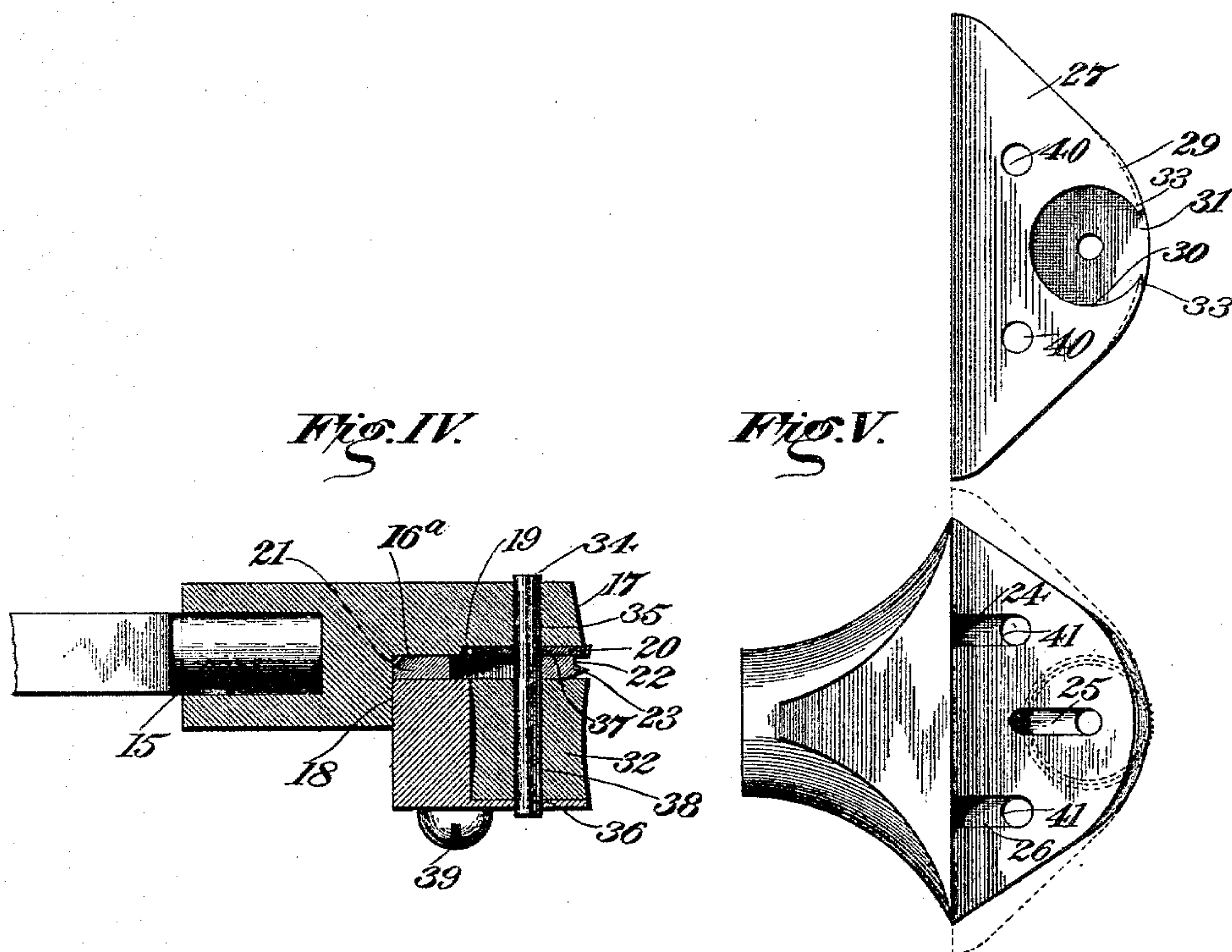
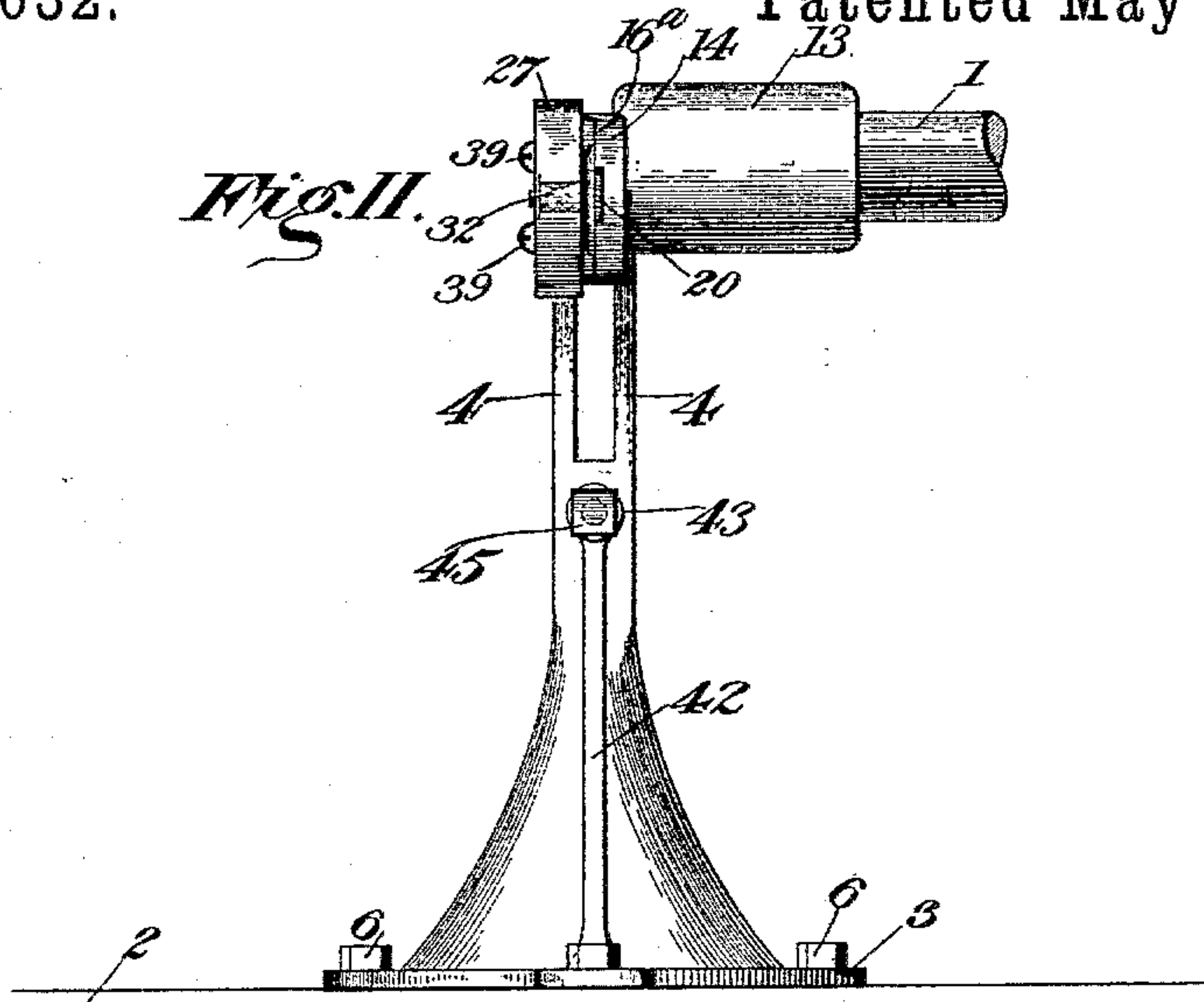
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UNITED STATES PATENT OFFICE.

WILLIAM H. TAYLOR, OF BALTIMORE, MARYLAND.

MACHINE FOR FINISHING SHOE-COUNTERS.

SPECIFICATION forming part of Letters Patent No. 559,632, dated May 5, 1896.

Application filed May 11, 1895. Serial No. 548,988. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. TAYLOR, of Baltimore, State of Maryland, have invented certain new and useful Improvements in Machines for Finishing Shoe-Counters, of which the following is a specification, reference being had to the accompanying drawings.

Heretofore in the manufacture of shoes it has been the practice to finish the counter manually by rubbing and hammering the leather upon the counter while the last is in place, so as to make the leather around the counter lie close and snug in the proper position. This operation requires the employment of skilled labor, because unless the work is properly done the leather around the counter will become unequally distributed and will not present the proper smooth appearance. Moreover, it is necessary in finishing the shoe in this way to put it through several successive operations, which adds materially to the cost of manufacture.

The object of my invention is, through the aid of a special machine, to dispense with some of the steps heretofore employed, and to completely smooth and finish the counter, form the seat-bead, and mill the heel-seat in one operation.

I am aware that combined tools are employed for finishing the top-lift bead and milling and burnishing the heel; but my invention is clearly distinguishable from that kind of tool, inasmuch as hitherto it has been considered impracticable to finish the counter in any other manner than by hand.

In the accompanying drawings, Figure I is a side elevation of the preferred form of my machine. Fig. II is a view taken at right angles thereto. Fig. III is a top plan view thereof. Fig. IV is a horizontal section of the tool-head detached. Fig. V is a plan view thereof, with the counter-roller socket-piece removed and displayed at the side of the head.

Referring to the figures on the drawings, 1 indicates the end of a revoluble shaft, which in practice is carried in suitable bearings (not illustrated) and derives motion from a source of power. (Not illustrated.) 2 indicates a bench underneath the same.

3 indicates the broad solid base of an arm-

support, which may be provided with parallel uprights 4, each having a series of regular opposite perforations 5. The base is designed to be secured to the bench, as by screws 6, and the several pairs of apertures 5 are designed to accommodate at a suitable height, with respect to the surface of the bench, a pivot pin or bolt 7, that pivotally carries a vibratory arm 8. The arm is provided with a longitudinal bearing-slot 9, within which works an antifriction-roller 10, that is carried upon an eccentric-pin 11, secured to the face of an eccentric-head 13, that, as by screws 13^a, is fixed to the end of the shaft 1. By this arrangement the revolution of the shaft imparts to the vibratory arm a rapid vibratory movement upon the pin 7. The end of the arm 8 is designed to carry a tool-head 14, for which purpose it may be provided with a cylindrical reduced end 15, that enters a corresponding bore in the head and is held in place as by an abutment-screw or screw-bolt 16. The head is cut away to form a bench 16^a, having a curved forward end 17, whose surface is preferably slightly retreating, so as not to come in contact with the heel. A transverse shoulder 18 defines the bench from the rest of the head. In the top of the bench a recess 19 snugly accommodates a milling-wheel 20, whose edge projects slightly beyond the curved front 17 of the bench. The thickness of the wheel is such that when set in the recess its surface is substantially flush with the surface of the bench.

21 indicates a seat-beading plate which, in general outline, conforms to the shape of the curved part 17 of the bench, and which is provided with a seat-beading groove 22, which is partially defined by a projecting lip or wedge-shaped flange 23.

In practice the beading-plate 21 is laid upon the surface of the bench and its lip is adjusted so as properly to finish the heel-seat and properly to apply the milling-wheel thereto. The beading-plate 21 is provided with slots 24, 25, and 26, which serve to render it properly adjustable, as will hereinafter more clearly appear.

27 indicates a counter-roller socket-piece, which is preferably made of comparatively

thick and heavy metal, and which is designed to fit upon top of the beading-plate 21, with its rear side snugly set against the face of the shoulder 18. The rear face thereof, however, preferably projects considerably beyond the side of the head 14, so as to expose a sufficiently broad obstruction to the flame of a gas-jet pipe 28, located so as to discharge against it. By this means, as the socket-piece 27 is vibrated across the flame, the head becomes heated to a proper temperature, while the socket-piece, by reason of its depth and arrangement, prevents the passage of the flame beyond its rear face. The front face of the socket-piece preferably conforms, in general outline, to the curved face 17 of the bench and the corresponding edge of the beading-plate, but in the transverse direction it is preferably curved, as illustrated at 29, so as to conform to the curve of the counter to which it is designed to be applied. It is therefore susceptible of a variety of modifications of form, depending upon the different shapes of the counters as they occur in different styles and sizes of shoe.

Within the counter socket-piece is provided a counter-roller socket 30, that is open at its forward edge 31 and is designed to receive a counter-finishing roller 32. The surface of this roller is preferably slightly concave to conform to the transverse curvature of the socket-piece. Its surface projects slightly through the aperture 31, so that in practice it may come in contact with the counter to be finished. In order, however, that in its work it may not pinch or deface delicate material, it is preferably protected by guard-lips 33, which are formed from the jutting walls of the socket, that in shape conform to the curvature of the roller. A pin 34, passing through apertures 35 and 36 in the bench and socket-piece, respectively, through a central aperture 37 in the milling-wheel, a similar bore 38 in the counter-roller, and the slot 25 in the beading-plate, serves to assist in holding the pivoted parts in operative relations. The socket-piece may be secured in place, as by screws 39 screwing through apertures 40, the slots 24 and 26 in the beading-plate, and into the screw-threaded apertures 41 in the bench.

42 indicates the standard of a shoe-guide rest that carries in a bored head 43 a longitudinally-movable rod 44, that is provided with a snub-head 45. A spring 46, located between the head 43 of the standard and the snub-head 45, serves to yieldingly project the rod from the standard, while a pin 47 in the rod moving in a slot 48, that extends partially through the length of the head of the standard, serves to prevent the separation of the rod from the standard and to prevent its revolving in the bore thereof. By this means the snub-head of the rod is presented to afford a suitable yielding support to the shoe, as illustrated.

In operation, the machine being in motion

and the head being properly heated by the flame of the gas-jet, the shoe is applied by an operator to the moving surface of the head. The lip 23 being inserted between the heel-seat and the counter serves to guide the shoe and finish the edge of the heel-seat. At the same time the seat is properly milled and the counter leather, through the operation of the counter-roller against it, is smoothly and evenly distributed, shaped, and finished.

As relates to my improvement in the art the head of the machine may be modified in many respects, the form illustrated being, however, one embodiment of suitable mechanism for the purpose, and, as respects the machine, being a preferable form of embodiment thereof.

What I claim is—

1. The combination with a head and counter-finishing roller revolvably carried therein, of a laterally-projecting heating-surface to one side of the head and behind the roller, substantially as specified.

2. The combination with a head, roller-socket, and roller therein, of lips upon the roller-socket overlapping and protecting the roller, substantially as set forth.

3. The combination with a head and roller-socket therein, of lips upon the roller-socket overlapping and protecting the roller, the face of the head and the roller being correspondingly transversely curved to fit a shoe-counter, substantially as specified.

4. The combination with a head, recess, and milling-wheel within the recess, of a beading-plate, a roller-socket piece, roller, and mechanism for uniting said parts, substantially as set forth.

5. The combination with a head, beading-plate, roller-socket piece, and roller, a socket-piece projecting laterally beyond the head to afford a heating-surface upon its rear side, substantially as set forth.

6. The combination with a head having a curved, and retreating front portion, of a recess, and milling-wheel therein a beading-plate, a socket-roller piece, socket-roller, and means for securing the parts together, substantially as set forth.

7. The combination with a horizontal vibratory arm and a counter-finishing head upon the extremity thereof, of a horizontally-yielding shoe-guide rest below and in front of the finishing-head, and means for vertically adjusting the fulcrum of the vibratory arm, the horizontal yielding of the guide-rest and the vertical adjustment of the fulcrum of the vibratory arm accomplishing a vertical and longitudinal adjustment of the relative positions of the guide-rest and finishing-head to accommodate shoes of different sizes, substantially as specified.

8. The combination with an arm-support and arm, of a fixed revoluble shaft, and means for eccentrically and loosely pivoting the arm to the shaft, a shoe-finishing head on

the free end of the arm, a shoe-guide rest in
opposite proximity to the finishing-head, and
means for adjustably pivoting the arm upon
the support to adjust the relations between
5 the head and the shoe-guide rest to accom-
modate shoes of different sizes, substantially
as specified.

In testimony of all which I have hereunto
subscribed my name.

WILLIAM H. TAYLOR.

Witnesses:

SAMUEL B. WILSON,
JOHN F. KENNY.